



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/775,750

02/09/2004

Patrick L. Ohm

57525.010109

8689

7590

11/15/2004

John S. Pacocha  
GREENBERG TRAURIG, P.C.  
Suite 2500  
77 West Wacker Drive  
Chicago, IL 60601-1732

EXAMINER

GUADALUPE, YARITZA

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/775,750	<b>Applicant(s)</b> OHM ET AL.	
	<b>Examiner</b> Yaritza Guadalupe McCall	<b>Art Unit</b> 2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/10/2004</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

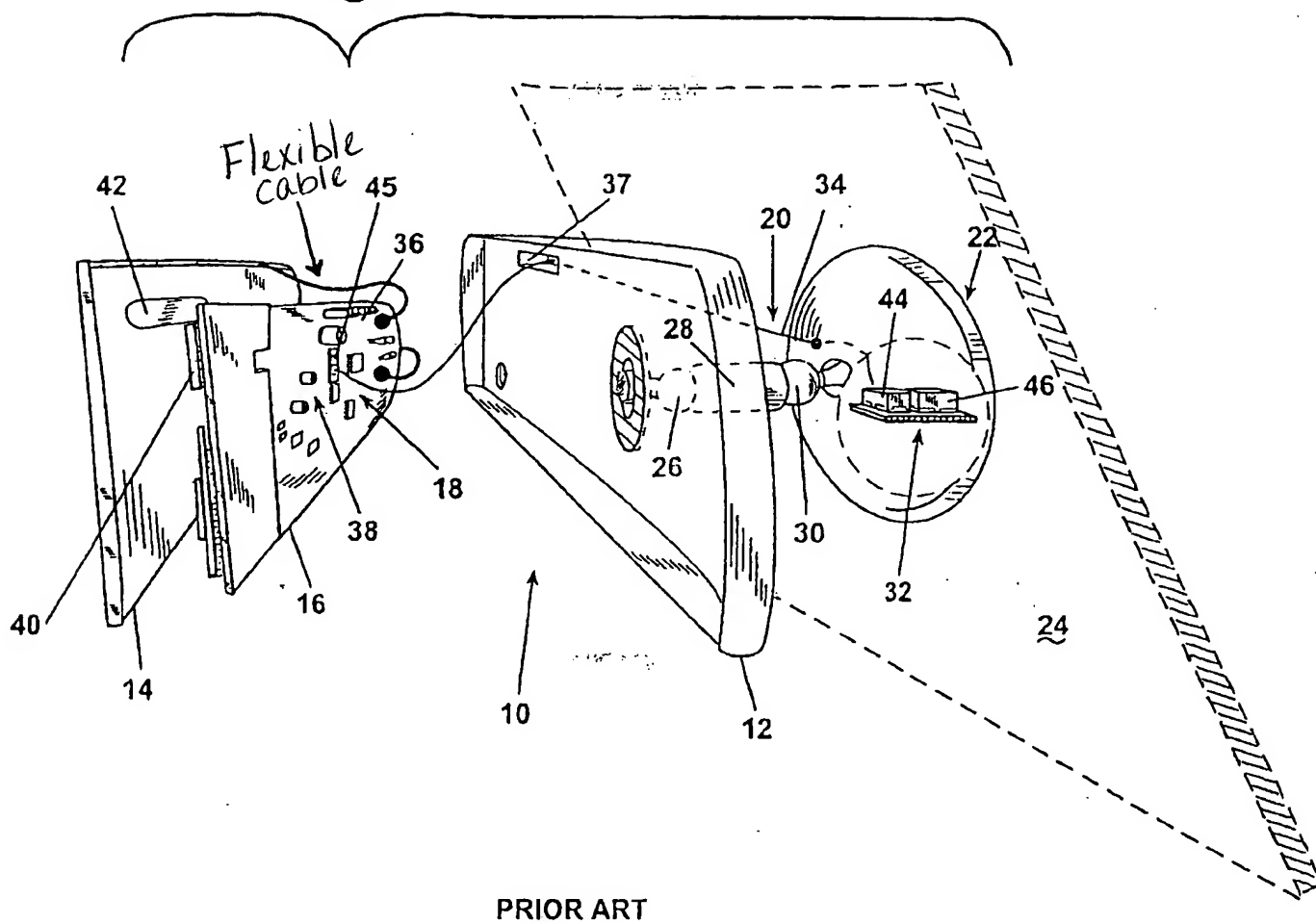
2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1 – 2 and 5 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bugno et al. ( US 6,140,933 ) in view of Michmerhuizen ( US 6,047,237 ).

With respect to claim 1, Bugno et al. discloses in the background of the invention and Figure 1, a digital display compass accessory for mounting on a rear view mirror of a vehicle, in which the vehicle has a windshield ( 24 ) having an inside surface, said rear view mirror (12, 14) being disposed adjacent the inside surface of the windshield and having a back side ( 12 ), which is oriented towards the windshield, and a front side, including the mirror surface ( 14 ), which is oriented towards a driver of the vehicle, said assembly further comprising:

- a. a direction sensor module ( 32 ) that is attached to the inside of the vehicle's windshield ( See Figure 1 ) and generating signals corresponding to a direction that it is facing ( See Column 2, lines 1 – 3 );
- b. an electronic housing ( 16 ) that is attached to the back side of the rear view mirror;
- c. a digital display portion ( 40 ) that is attached to the front side of the rear view mirror in order to be visually seen by an observer;
- d. a flexible transmission cord ( 34 ) extending from the directional sensor module (32) to the electronic housing ( 16 ), and transmitting the signals from the direction sensor module ( See Column 1, lines 49 – 53);
- e. the electronic housing containing electronics for converting the signals received from the transmission cord to drive a digital display representative of the direction sensed by the direction sensor module; and
- f. a flexible cable ( See annotations in attached Figure 1 ) extending from the backside of the mirror to the front side of the mirror and providing electronic communication from the electronic housing to the digital display.

Fig.1



Regarding claim 2, Bugno et al. also discloses, in the background of the invention, said directional sensor ( 32 ) being mounted in the bracket housing ( 22 ) for selectable positioning relative to the inside of the vehicle windshield ( See Column 2, lines 54 – 67 ).

With regards to claim 5, Bugno et al. also discloses an assembly in which the flexible cable extending from the backside of the mirror to the front side of the mirror also provides electronic communication from the digital display to the electronic housing ( See Column 1, lines 53 – 60 ).

Bugno et al. does not disclose the electronic housing containing a battery power source as stated in claim 1. Bugno et al. does not discloses the housing providing at least one feature in addition to the digital display representative of the direction sensed by the direction sensor module, and said digital display portion carrying an actuator for selecting the at least one feature as stated in claim 6.

With respect to claim 1 : Bugno et al. discloses a compass assembly as stated above, comprising an electronic housing ( 16 ) that is attached to the back side of the rear view mirror but does not specifies the use of a power source contained within said housing. Michmerhuizen discloses a compass system comprising a console ( 212 ) having a housing centered near the rearview mirror ( 218 ) of a vehicle, said console housing containing a micro-controller / electronic housing ( 15 ), a directional / compass sensor ( 25 ), a display panel and a digital display ( 35, 252 ); said electronic system including a power source module ( 60 ) that is

Art Unit: 2859

connected to the vehicle's ignition power line for supplying power to the various components while filtering transients from the ignition power line and protecting the system from such transients to isolate the system from any input noise, and to eliminate radiated output emissions ( See Column 4, lines 56 – 62 ). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to add a battery power source as taught by Michmerhuizen to the electronic housing disclosed by Bugno et al. in order to supply power to the various components while filtering transients from the ignition power line and protecting the system from such transients to isolate the system from any input noise, and to eliminate radiated output emissions ( See Column 4, lines 56 – 62 ).

In regards to claim 6 : Michmerhuizen teaches a compass system in which the electronics ( 15 ) contained in the housing provide at least one feature, i.e., fuel economy, elapsed, time, external temperature, tripometer, etc., in addition to the digital display representative of the direction sensed by the direction sensor module ( See Column 4, lines 32 – 42, 63 and 67 and Column 5, lines 1 – 10 ); said digital display portion also carrying an actuator / control switches (226, 228, 230, 238) for selecting the at least one feature. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the compass assembly disclosed by Bugno et al. by adding an actuator / control switches and additional features in the electronic housing as taught by Michmerhuizen in order to increase the versatility of the assembly by providing critical data to the user that may affect the vehicle's performance and safety.

Art Unit: 2859

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bugno et al. (US 6,140,933 ) in view of Michmerhuizen ( US 6,047,237 ), as applied to claims 1 – 2 and 5 – 6 above, and further in view of Lindberg ( US 5,339,529 ).

Bugno et al. and Michmerhuizen disclose an assembly and system as stated in paragraph 3 above.

Bugno et al. and Michmerhuizen do not disclose the directional sensor module including a plate attached to the inside of the vehicle windshield; the plate having a pair of spaced apart tabs opposite the vehicle windshield; and a sensor arm mounted between the tabs for pivotal movement relative to the vehicle windshield as stated in claim 3. Bugno et al. and Michmerhuizen do not disclose a frictional engagement between the sensor arm and at least one of the tabs to facilitate selectable pivotal positioning relative to the inside of the vehicle windshield as stated in claim 4.

With regards to claims 3 and 4 : Bugno et al. and Michmerhuizen disclose a sensor ( 32 ) attached to the inside of the vehicle's windshield, but fails to disclose the particular structure of the sensor module. Lindberg discloses a sensor mount ( 30, 40, 60 ) having a plate ( 42, 44 ) attached to the inside of the vehicle windshield ( See Figure 1 of Lindberg ), said plate having a pair of spaced apart tabs ( 52, 54, 56 ) opposite the vehicle windshield extending in the direction towards the rearview mirror; a sensor arm ( 30, 32, 34 ) housing the sensor components and mounted between the tabs for pivotal movement, by means of a pivot axle ( See Column 3, lines



Art Unit: 2859

45 – 52 ), relative to the vehicle windshield; said pivot axle having adjustment discs ( 70 ) provided with indentations ( 75 ) in its outer surface to provide a frictional engagement between the sensor arm and the tabs to facilitate selectable pivotal positioning ( See Column 3, lines 55 – 60 ). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a sensor mount having a plate, a pair of tabs and a sensor arm for housing the sensor as taught by Lindberg to the sensor assembly as taught by Bugno et al. and Michmerhuizen in order to increase the accuracy of the sensor measurements by allowing adjustment and locking of the sensor with respect to the plate and prevent from undesired movement that may increase noise and error in the sensor readings.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bugno et al. (US 6,140,933 ) in view of Michmerhuizen ( US 6,047,237 ), as applied to claims 1 – 2 and 5 - 6 above, and further in view of Aoki et al. ( US 6,504,262 ).

Bugno et al. and Michmerhuizen disclose an assembly and system as stated in paragraph 3 above.

Bugno et al. and Michmerhuizen do not disclose the flexible cable extending from the backside of the minor to the front side of the mirror being flat as stated in claim 7.

In regards to claim 7: Bugno et al. and Michmerhuizen disclose a sensor ( 32 ) having a flexible cable ( as shown in attached Figure 1 above ) extending from the electronic housing (16) of the back of the mirror ( 14 ) to the display ( 40 ) in the front of the mirror, but does not specifies the particular type of cable used. Aoki et al. discloses a distribution structure for a vehicle's electrical connection, wherein electric devices ( 21 – 26 ) are connected by means of flat cables (14) to a junction box ( 12 ). Aoki et al. teaches the use of said flat cables ( 14 ) in order to greatly simplify and minimize the assembling process and minimize manufacturing costs ( See Column 4, lines 50 – 64 ). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to replace the flexible cable disclosed by Bugno et al. and Michmerhuizen with a flat cable as taught by Aoki et al. in order to greatly simplify and minimize the assembling process and minimize manufacturing costs ( See Column 4, lines 50 – 64 ) and since it will provide the additional benefit of not interfering with the driver's range of sight due to its reduced thickness.

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are considered of relevance to the present application:

- Clark et al. ( US 4,505,054 )
- DeLine et al. ( US Pub. No. 2004/0199310 )
- Suman et al. ( US 5,455,716 )

Art Unit: 2859

- Weller et al. ( US Pub. No. 2004/0032675 )
- Carter et al. ( US Pub. No. 2004/0207940 )
- Schofield ( US Pub. No. 2003/0236622 )
- DeVries Jr. et al. ( US Pub. No. 2003/0127513 )
- DeLine et al. ( US 6,243,003 )
- Regan ( US 6,218,934 )
- DeLine et al. ( US 6,172,613 )
- Lynam et al. ( US 6,217,181 )
- Marcus ( US 4,425,717 )
- Chih ( US 6,742,270 )
- Liu ( US 5,429,481 )
- Liou ( US 5,169,257 )
- Dolasia ( US 5,106,177 )
- Van Rosberg ( US 4,453,285 )
- Garbs ( US 1,772,439 )
- Harland ( US 2,790,617 )

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yaritza Guadalupe McCall whose telephone number is (571)272-2244. The examiner can normally be reached on 8:00 AM - 5:30 PM.

Art Unit: 2859

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Yaritza Guadalupe-McCall  
Patent Examiner  
Art Unit 2859

YGM  
November 10, 2004